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**Date:** Monday, September 27, 2010 3:06:53 PM  
**Attachments:** [.png](#)  
[Pres1\\_NLH0201PAC - Nalcor Comments - 27-Sep-10.pdf](#)

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As discussed.



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----- Forwarded by Jason Kean/NLHydro on 09/27/2010 03:06 PM -----

From: "Project Solutions Inc." <[project.solutions@\[REDACTED\]](mailto:project.solutions@[REDACTED])>

To: <[JasonKean@nalcorenergy.com](mailto:JasonKean@nalcorenergy.com)>

Date: 09/27/2010 02:54 PM

Subject:

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Summary of Comments on No Slide Title

Page: 1

Number: 1	Author: Project Solutions	Subject: Replacement Text	Date: 9/27/2010 1:11:06 PM -02'30'
Summary of			
Number: 2	Author: Project Solutions	Subject: Cross-Out	Date: 9/27/2010 1:11:24 PM -02'30'
Number: 3	Author: Project Solutions	Subject: Cross-Out	Date: 9/27/2010 1:11:35 PM -02'30'



INDEPENDENT PROJECT ANALYSIS

~~Excerpts from~~ IPA's  
Review of the  
Muskrat Falls  
Generation Project  
and Island Link  
Transmission Project

~~Presented to Nalcor Energy~~  
September 2010

~~H-0201-PAC~~

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## Independent Project Analysis, Inc. (IPA)

- IPA was founded 1987 as a research and benchmarking firm devoted entirely to capital projects, and is now a leader in project management research and consulting
- IPA's purpose is to improve the competitiveness of our customers through more effective use of capital in their businesses
- Clients are in the extractive and manufacturing industries
  - Extractive: oil, gas, iron, copper, zinc, diamonds, etc.
  - Manufacturing: chemicals, fuels, pharmaceuticals, paper, food processing, consumer products



## IPA Proprietary Databases

*Over 12,000 Projects from 300+ Organizations*

- Database contains projects ranging from US\$20,000 to US\$25 billion, represented by many different industries served by IPA
- Project Evaluation System (PES®) used to evaluate project outcomes; premise is that outcomes of projects can be predicted by understanding historical relationship between project drivers and project's final outcomes
- All information contained in IPA databases is carefully protected and kept as confidential proprietary data

Page: 4

Number: 1	Author: Project Solutions	Subject: Note	Date: 9/27/2010 1:15:10 PM -02'30'
Could we add a slide here depicting the three phases of FEL (reference Slide 16 from larger presentation).			
Number: 2	Author: Project Solutions	Subject: Inserted Text	Date: 9/27/2010 1:12:29 PM -02'30'
Nalcor Energy			



## Evaluation of the Muskrat Falls Generation Project and Island Link Transmission Project

- IPA performed Pacesetter Evaluation of the project in August/September 2010
- Objective of IPA's Pacesetter is to:
  - Provide project team with an early interpretation of the drivers and expected outcomes of a project
  - Offer specific recommendations for successful completion of the critical project definition phase
- Comprehensive interviews performed over 3-day period by IPA representatives
- Detailed findings presented to the project team

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Number: 1	Author: Project Solutions	Subject: Inserted Text	Date: 9/27/2010 1:13:30 PM -02'30'
(i.e. Phase 2 of Nalcor Energy's Gateway Process)			
Number: 2	Author: Project Solutions	Subject: Note	Date: 9/27/2010 1:41:52 PM -02'30'
What about referencing team's use of best practices thus far? This will facilitate improved bridging to last bullet.			
Number: 3	Author: Project Solutions	Subject: Replacement Text	Date: 9/27/2010 1:53:53 PM -02'30'
Experienced, high-involved Project Team in place, however, results of team surveys identified several opportunities to enhance overall team functionality / effectiveness going into FEL 3 (e.g. clarify roles and responsibilities, execution strategy).			
Number: 4	Author: Project Solutions	Subject: Replacement Text	Date: 9/27/2010 1:40:32 PM -02'30'
As Nalcor ramps up its project management team in preparation for the EPCm consultant's mobilization in Q1-11, a focus, concerted effort must be directed towards ensuring overall team alignment and integration in order to avoid the risk of erosion of the benefits of Best Practices applied thus far.			
Number: 5	Author: Project Solutions	Subject: Note	Date: 9/27/2010 1:43:26 PM -02'30'
What about including a reference to a high-level of owner involvement and the potential benefits it brings?			



## Key Findings

### *Muskrat Falls Project & Island Link Transmission Project*

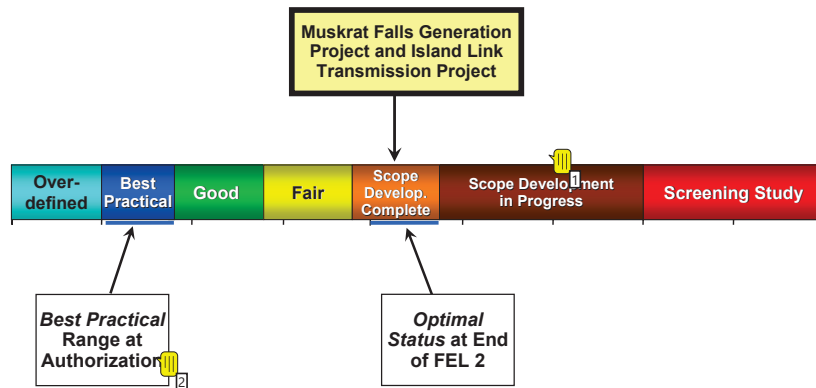
- Project is better prepared than a typical megaproject at end of Front-End Loading (FEL) 2 <sup>1</sup>
- Project has clear objectives and a well-developed project team that has closed the project scope and achieved optimal project definition <sup>2</sup>
- ~~However, team misalignment on several key project elements presents risks and challenges going forward~~ <sup>3</sup>
- ~~As owner ramps up the team and contractors mobilize in next few months, lingering team issues will magnify risks and potentially erode benefits of Best Practices applied thus far~~ <sup>4</sup>



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Number: 1	Author: Project Solutions	Subject: Note	Date: 9/27/2010 1:49:39 PM -02'30'
Add mega-project average at FEL 2			
Number: 2	Author: Project Solutions	Subject: Note	Date: 9/27/2010 1:50:12 PM -02'30'
Can we replace Authorization with Project Sanction or end of FEL 3?			

## FEL Status of Muskrat Falls Generation Project and Island Link Transmission Project at End of FEL 2



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Number: 1	Author: Project Solutions	Subject: Inserted Text	Date: 9/27/2010 1:51:08 PM -02'30'
Continue with plans to,			
Number: 2	Author: Project Solutions	Subject: Cross-Out	Date: 9/27/2010 1:51:31 PM -02'30'
Number: 3	Author: Project Solutions	Subject: Inserted Text	Date: 9/27/2010 1:51:25 PM -02'30'
all open			
Number: 4	Author: Project Solutions	Subject: Inserted Text	Date: 9/27/2010 1:52:04 PM -02'30'
through with			



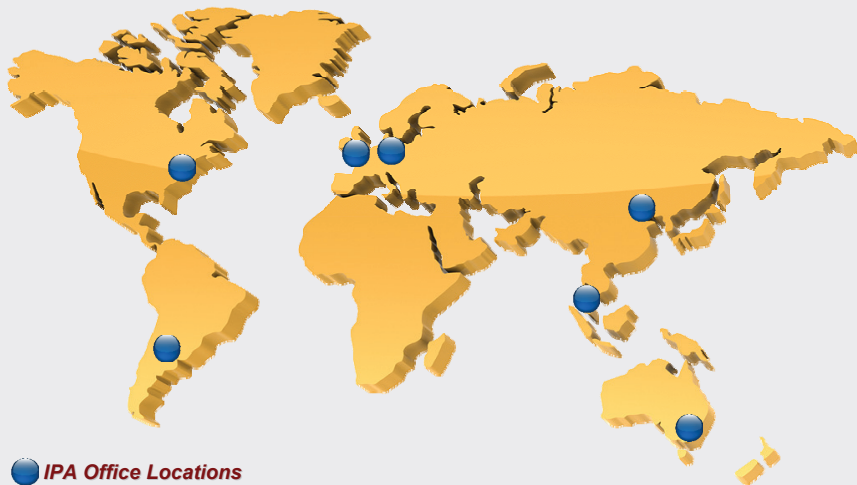
## Recommendations

### *Muskrat Falls Project & Island Link Transmission Project*

- Before ramping up for FEL 3, develop specific steps to address and resolve gaps in Team Functionality
- Develop detail interface management plans that provide clear directions to contractors
- To mitigate risk of late changes, implement and strictly adhere to strong change management process, and close ongoing studies
- Adequately plan for labor shortages, which are likely to occur, and follow through on resource loading project schedule
- Follow plan to increase and maintain active owner involvement throughout project

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